



OUR TOWN HALL

MANCHESTER CITY COUNCIL

Alteration to height of Chimney 26 

Justification Statement

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Date: 05/06/2024

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Issue Details

DOCUMENT TITLE	DOCUMENT REVISION	ISSUED FOR	ISSUE DATE	REVIEWD BY
Alteration to height of Chimney 26 Justification statement	-	Review and Comment	05/06/2024	JC

The chimney in question is the last of 35 chimneys to be restored and repaired. It is on the west elevation of the Great Hall and was in a severely damaged condition (refer to photos 1 and 2 below). The construction of this chimney was peculiar in that it was tall and slender as it only served a few offices each side of the adjacent light well, over the Bees Landing, but it had to be high to get the draught because of the surrounding structures. Consequently, it suffered from over saturation, and this caused the damage which had been a perennial maintenance problem, and is evident from the remedial strapping, zinc capping and significant and numerous stone erosion defects shown on the photographs (fig 1 and fig 2).



fig 1 and fig 2 photos of existing condition prior to the project commencing in 2017

The bad condition of the stack necessitated partial demolition and reconstruction, incorporating considerable renewal of both brick and stone masonry. The scheme that gained consent (with conditions) in 2019, was to reconstruct the chimney to the same height it was originally built to.

This chimney, and its associated flues, had previously caused considerable water ingress and salt crystallisation issues in the stonework at the west end of the Great Hall which have now been carefully conserved internally during an earlier stage of the OTH project. However, the risk of recurrence of these defects will be greater the higher this chimney is in the reconstructed state, and particularly concerning is the risk to the completed work in the Great Hall if there is any further exposure of the masonry to the weather in its deconstructed state or during the reconstruction.

Photograph fig 3 below shows the chimney in its current deconstructed state, protected under the temporary enclosure over the re-slatted Great Hall roof but before any reconstruction or repair work to the chimney stack has commenced.

The consented full reinstatement proposal cannot be implemented under the existing temporary cover so, if it was pursued, it would mean having to expose the deconstructed and un-repaired remnant stack to the weather whilst the enclosure scaffolding is dismantled and the Bees landing rooflight is constructed, and the scaffold to reconstruct the chimney is erected and the reconstruction carried out. This scaffolding operation

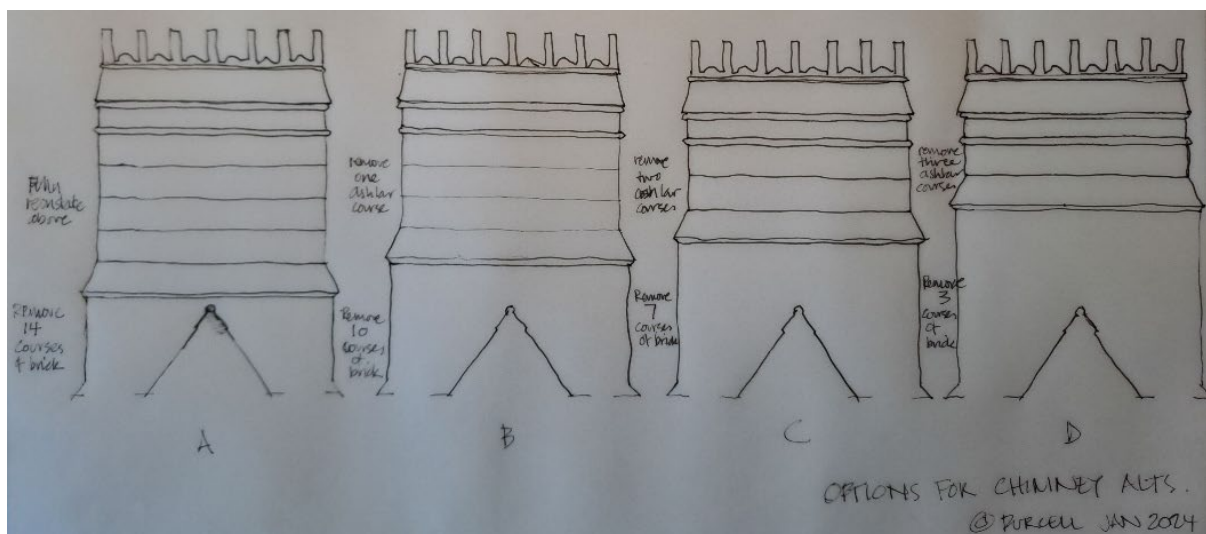
and phase of the work described would take a significant period, and now that the cause of the defects in the Great Hall are fully understood, the additional resultant vulnerability is considered to be an unacceptable risk to the historic fabric and the conservation work that has already been completed. It is in this context that the design team proposed a revision to the reconstruction proposal which is the subject of this justification statement.



fig 3 current deconstructed state

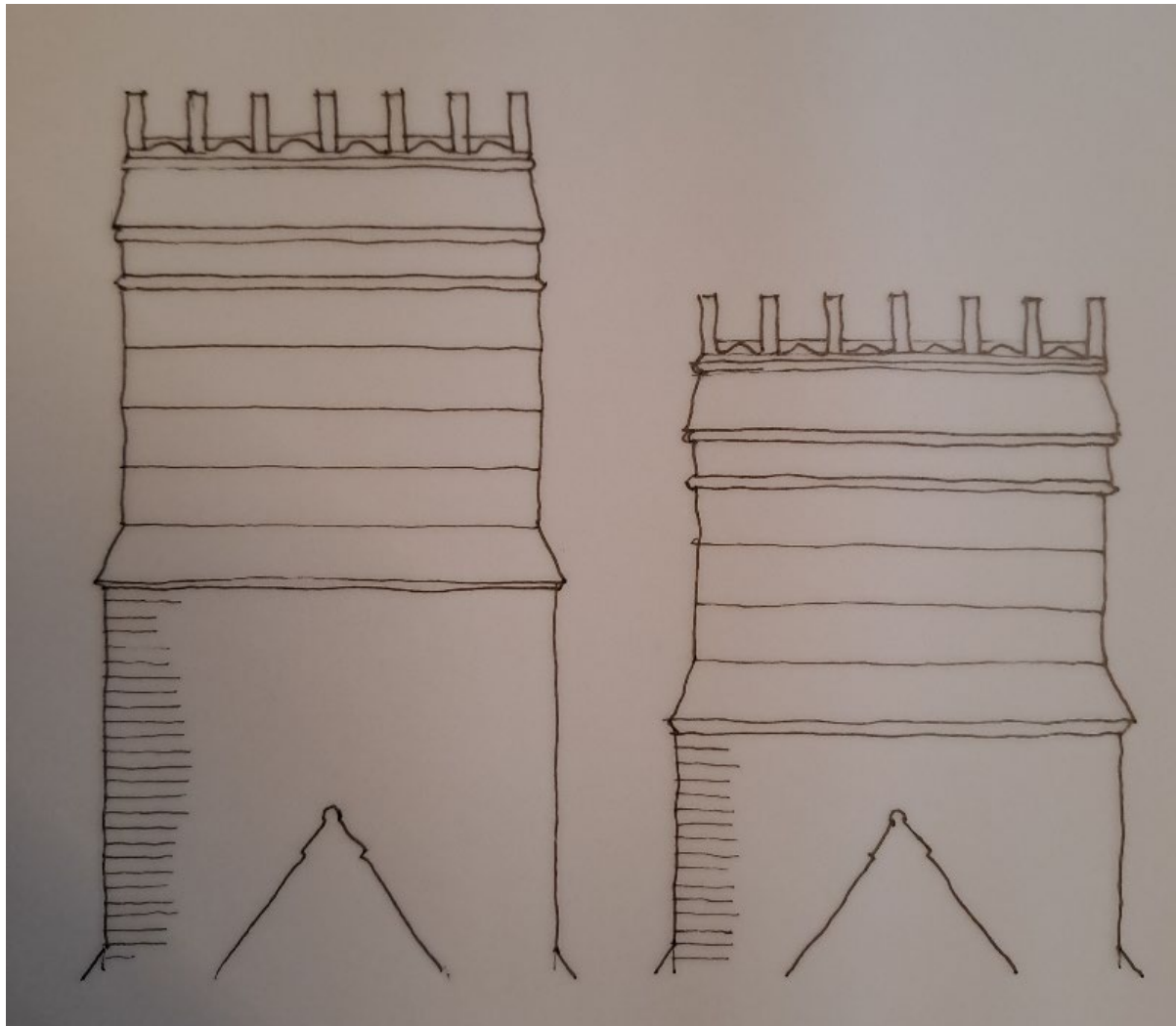
The revised proposal is to reduce the height of the reinstated stack so that it can be reconstructed under the existing enclosure which will mitigate the additional risk to the historic fabric and highly significant heritage interiors beneath during the remaining construction stages but will also reduce the ongoing risk of water ingress of saturation in the future due to the reduction in the surface area of masonry exposed to the weather.

A number of options of achieving the reduction in height were put to the client and the LPA design and conservation manager as the illustration fig 4 below.



All the options proposed to reinstate all the moulded stone detailing to the cappings, string and plinth, as originally designed, and in consultation with the client and LPA there was a clear preference for option B which removed only one course of ashlar stonework and 10 courses of the brick below. This retained an appropriate proportion and spacing of features, and a practical distance above the ridge tiles of the Great Hall roof. The material arising from the alteration will be used for the repairs to this chimney of other features on the building within the project.

The sketch fig 5 below shows the comparison between the original design and the modified option B design

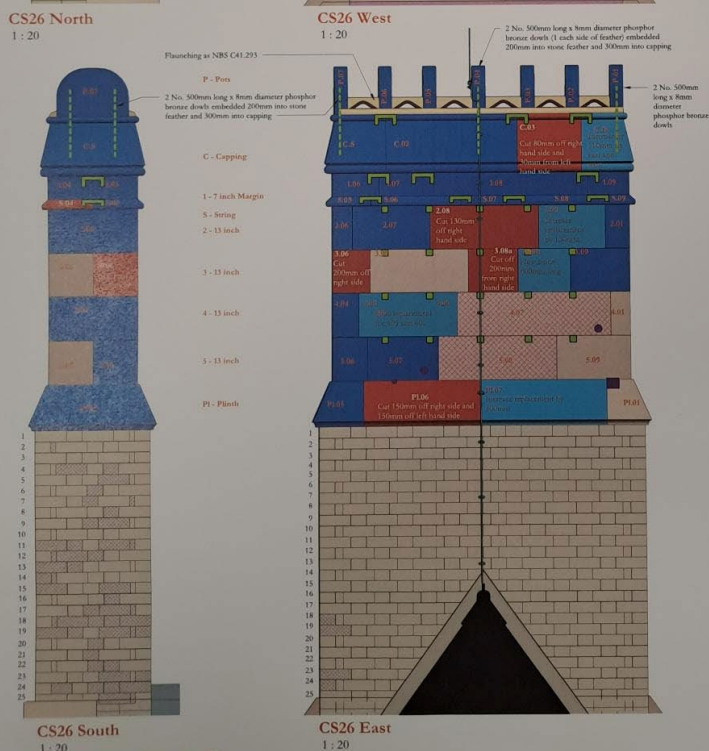
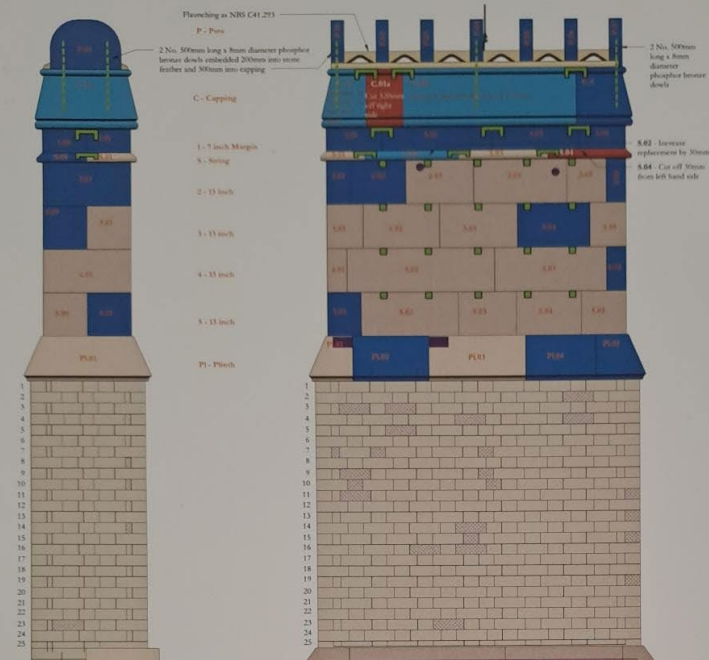


Original design on the left and modified design on the right.

Purcell January 2024

The conclusion of this statement is that the modification of the design is minor and appropriate and the impact on the integrity of the original design is negligible compared to the significant mitigation of potential risk of damage to the historic fabric within the remaining construction stages and into the future.

Appended to this statement are the construction drawings that have been issued by Purcell showing the previous proposal and the current scheme to be implemented

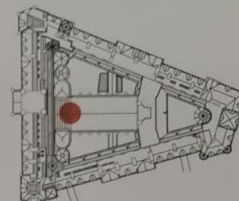


Scale Bars to be used as guidance only - refer to sheet size below

Scale	1:100	1:200	1:300	1:400	1:500	1:600	1:700	1:800	1:900	1:1000
1:100	100	200	300	400	500	600	700	800	900	1000
1:200	50	100	150	200	250	300	350	400	450	500
1:300	33	67	100	133	167	200	233	267	300	333
1:400	25	50	75	100	125	150	175	200	225	250
1:500	20	40	60	80	100	120	140	160	180	200
1:600	17	33	50	67	83	100	117	133	150	167
1:700	14	28	42	57	71	86	100	114	129	143
1:800	13	26	39	52	63	77	90	103	116	129
1:900	11	22	33	44	56	67	78	90	101	112

Notes:
Drawings are based on survey data and may not accurately represent what is physically present.
Do not scale from this drawing. All dimensions are to be verified on site before proceeding with the work.
All dimensions are in millimeters unless noted otherwise.
Purcell shall be notified in writing of any discrepancies.

Key Plan



KEY

	Existing stone and reference number
	Existing stone to be adjusted and retained
	Existing eroded or damaged stone to be retained after cutting to new size
	Existing stone cut to new size and used to replace damaged or eroded stone
	New stone like for like replacement of existing
	New stone new size to suit location following adjustment of existing stone
	Durable stone as NBS class C41.456
	Reusable stone as NBS class C41.459
	Proposed extent of dismantling and rebuild
	Replacement cramps between stones as NBS reference C41.282
	Replacement cramps between stones as NBS reference C41.285
	Replacement cramps across feathers as NBS reference C41.283
	Replace eroded terracotta blocks as NBS class C41.276
	Replace terracotta pot with new pot to match existing

NOTES

Refer to NBS reference C41.321 for rebuilding chimneys.
Sections of chimney that are not rebuilt are to be repaired as NBS reference C41.821 with brick sections repaired as reference C41.822.
The whole chimney is to be repaired as NBS reference C41.805.

REV	DATE	APPROVED	DRAWN	DESCRIPTION
03	13/10/2021	JC	GR	See note in revision cloud
02	23/07/2021	GR	TK	See note in revision cloud
01	26/05/2021	GR	TK	See note in revision cloud
-	28/05/2019	GR	SK	First issue

OUR TOWN HALL
PROJECT

PURCELL

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PROJECT STATUS	Riba Stage 5
CLIENT	Manchester City Council
PROJECT	Our Town Hall
DRAWING TITLE	Chimney Number CS26 Proposed repairs
SIZE & SCALE	A2: As indicated
DRAWING STATUS	S4 - Construction
JOB NUMBER	236959
DRAWING NO.	OTH-PUR-TH-RF-DWG-A-4186 03

Revision 03
Lightning protection added. Bronze cramps added across feathers and bronze dowels added to stone feather references P01, P04 and P7.

Revision 01
Drawing updated to construction status following validation survey.
Revision 02
C.S., C.S2, S.07, S.08, S.09, S.04, S.01, S.06 P1.05 all changed to like for like replacement. C.N. changed to 110mm increase on east and west. C.03 altered to remove 30mm from R15 and 30mm from L15. Add 30mm to S.02, remove 30mm from S.04, 200mm cut from R15 of S.08, new 400mm stone S.08 added. Additional 150mm cut from L15 of P1.06 and replacement P.07 increased in size to 300mm.

